



# TNRCC TECHNICAL GUIDANCE

## MUNICIPAL SOLID WASTE DIVISION

### **SUBJECT: Disposal of Special Wastes Associated with Development of Oil, Gas, and Geothermal Resources**

Recommendations for the management of wastes associated with the exploration, development or production of oil, gas, or geothermal resources regulated by the Railroad Commission of Texas (RRCT) in landfills permitted by the Municipal Solid Waste (MSW) Division of the Texas Natural Resource Conservation Commission (TNRCC). See the last page of table for explanation of asterisks and abbreviations.

<b>Description of Waste Items</b>	<b>RCRA Exempt</b>	<b>RRCT Minor Permit Required for Disposal in TNRCC Landfill</b>	<b>Treatment or Testing Recommended</b>	<b>TNRCC Approval Necessary for Landfill Disposal</b> <i>(at MSW Permitted Sites)</i>
Asbestos and asbestos-contaminated waste material	YES	YES	comply with federal & state regs. for asbestos, remove asbestos from metal, recycle metal	NO for sites that are approved to take asbestos
Bags, paper	NO	NO	<b>NONE [bags must be empty]</b>	NO
Brush & vegetation from clearing land, uncontaminated	NO	NO	<b>NONE</b> , compost	NO
Buckets, detergent	NO	NO	<b>NONE [must be empty]-recycle</b> if possible (scrap metal)	NO
Buckets, grease	NO	NO	<b>NONE [must be empty]-recycle</b> if possible (scrap metal)	NO
Concrete, contaminated from plants, compressor stations and other oil & gas facilities	NO	YES	testing determined on case-by-case basis	YES
concrete, uncontaminated from facilities	NO	NO	<b>NONE</b> if uncontaminated	NO
Containers, empty	NO	NO	<b>NONE [must be empty]-recycle</b> if possible (scrap metal)	NO
Drill cuttings	YES	YES	only cuttings, MSDS for additives, chlorides	YES
Barrels/drums 5-gallon buckets	NO	NO	<b>NONE-recycle</b> as scrap metal	NO
Fiberglass tanks and pipe	NO	NO	must be empty & clean, cut up or shredded	NO

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Description of Waste Items	RCRA Exempt	RRCT Minor Permit Required for Disposal in TNRCC Landfill	Treatment or Testing Recommended	TNRCC Approval Necessary for Landfill Disposal (at MSW Permitted Sites)
Filters, amine	YES	YES	drain, air dry for 48 hours TPH, TCLP benzene*	YES
Filters, cooling tower	YES	YES	drain, air dry, TCLP	YES chromium*
Filter media, dehydration	YES	YES	drain, air dry 48 hours TPH, TCLP benzene*	YES
Filters, gas condensate	YES	YES	drain, air dry 48 hours TPH, TCLP benzene*	YES
Filters, glycol	YES	YES	drain, air dry 48 hours TPH, TCLP benzene*	YES
Filters, saltwater	YES	YES	drain, air dry 48 hours, pH and total chlorides, TPH	YES
Filters, waste oil (1) entire unit is inside metal container	NO	YES	separate & <i>recycle</i> oil & metal parts	(1) Subject to 31 TAC330.136(c)
(2) replaceable inside units (paper/fiber)	NO	YES	<i>recycle</i> , waste-to-energy drain for at least 24 hrs., TCLP lead & benzene*	(2)YES
Iron sponge	YES	YES	allow to oxidize completely to prevent threat of combustion	YES
Metal plate, metal pipe, metal cable	NO	NO	<b>NONE-recycle</b> as scrap metal	NO
Molecular sieves	YES	YES	cool in non-hydrocarbon, inert atmosphere; hydrate in ambient air 24 hours; TPH; TCLP benzene*	YES
Muds, drilling	YES	YES	TCLP Barium*, TPH, BTEX* treatment to reduce hydrocarbons may be required	YES
Muds, drilling sacks of unused	NO	YES	MSDS return to vendor or use at other site if usable	YES
Mud additives, unused	NO	YES	(Barium), MSDS approval for small quantities only	YES
“Pigging waste” from gathering lines	YES	YES	TPH, TCLP benzene*, TCLP metals*, NORM, MSDS for corrosion inhibitors, TCLP arsenic*	YES
“Pigging waste” from transmission lines	NO	YES	TPH, TCLP benzene*, NORM, MSDS for corrosion inhibitors, TCLP arsenic*	YES

Description of Waste Items	RCRA Exempt	RRCT Minor Permit Required for Disposal in TNRCC Landfill	Treatment or Testing Recommended	TNRCC Approval Necessary for Landfill Disposal (at MSW Permitted Sites)
Pipe scale & other deposits removed from piping and equipment	YES	YES	TPH, TOX, TCLP metals*, NORM	YES
Pipe dope, unused	NO	YES	MSDS-may contain lead re-use if possible	YES
Plastic pit liners	YES	YES	determine type of contamination, clean well	NO
Pumps, junked, valves, etc.	NO	NO	NORM, <i>recycle</i>	NO
Rags/gloves, soiled	NO	NO	<b>NONE</b>	NO
Sand, produced	YES	YES	TPH, TCLP benzene*, NORM TCLP arsenic*	YES
Soils, hydrocarbon bearing (crude oil)	YES	YES	TPH, TCLP benzene* see TNRCC policy on contaminated soils	YES
Soils, hydrocarbon bearing (lube oil)	NO	YES	TCLP cadmium, chromium, lead*; TPH; TCLP benzene*; PCB's	YES
Sulfur, ferrous elemental sulfur & soil contaminated with sulfur	NO	YES	if uncontaminated <i>recover</i> & sell as raw material	YES requires approval on a case-by-case basis
Sorbent pads (crude oil & other exempt wastes)	YES	YES	TPH, TCLP benzene*, (TPH usually too high, treat for recovery/reuse)	YES TPH is usually too high for LFs
Sorbent pads (lube oil & other non-exempt)	NO	YES	TPH, TCLP benzene* TPH is usually too high for LFs	YES
Tank seals, rubber	NO	YES	drain, <i>recycle</i> (tire recycling facility)	YES
Tower packing	NO	YES	recycle, TCLP chromium	YES
Water treatment backwash solids	YES	YES	NORM, TCLP metals*	YES
Wooden pallets	NO	NO	<b>NONE</b> unless contaminated	NO

\*A less expensive alternative to TCLP Analysis is a Totals Analysis. If a total analysis (i.e. Total Lead, Total Benzene, etc.) exceeds the limits listed below, then TCLP must be performed, and the TCLP results must not exceed the stated limits for MSW landfill disposal:

<u>Analyte</u>	<u>Total Limit</u>	<u>TCLP Limit</u>
Benzene	10 mg/Kg	0.5 mg/L
Arsenic	36 mg/Kg	1.8 mg/L
Barium	2000 mg/Kg	100 mg/L
Cadmium	10 mg/Kg	0.5 mg/L
Chromium	100 mg/Kg	5.0 mg/L
Lead	30 mg/Kg	1.5 mg/L
Mercury	4 mg/Kg	0.2 mg/L
Selenium	20 mg/Kg	1.0 mg/L
Silver	100 mg/Kg	5.0 mg/L

Results of the following analyses must be within the limits stated for landfill disposal in a Municipal Solid Waste facility:

TPH	=	1500 mg/Kg (for soils, other wastes on case-by-case review)
TOX	=	50 mg/Kg
PCBs	=	<50 mg/Kg
Chlorides	=	case-by-case review
NORM	=	below regulatory limit

Explanation of abbreviations:

LF	=	Landfill
MSDS	=	Material Safety Data Sheet(s)
MSW	=	Municipal Solid Waste (Division of TNRCC)
NORM	=	Naturally Occurring Radioactive Materials
PCB	=	Polychlorinated Biphenyls
RCRA	=	Resource Conservation and Recovery Act
RRCT	=	Railroad Commission of Texas
TCLP	=	Toxicity Characteristic Leaching Procedure
TOX	=	Total Organic Halides (X = Fluorine, Chlorine, Bromine, or Iodine)
TPH	=	Total Petroleum Hydrocarbons (EPA method 418.1 with known standard)

**NOTE:** The TNRCC considers landfill disposal as the least desirable method of waste management.

State policy established a waste recycling rate of 40% by 1994 (Senate Bill 1340, 72nd Legislature, Regular Session). This requires recycling of all metal items whenever possible! Areas where recycling may be readily available are noted in italics.

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